

LAHIVE  
&  
COCKFIELD  
LLP

COUNSELLORS AT LAW  
28 STATE STREET  
BOSTON, MASSACHUSETTS 02109-1784  
TELEPHONE (617) 227-7400  
FAX (617) 742-4214  
lc@lahive.com

JOHN A. LAHIVE, JR. (1928-1997)  
THOMAS V. SMURZYNSKI  
RALPH A. LOREN  
GIULIO A. DeCONTI, JR.  
ANN LAMPORT HAMMITTE  
ELIZABETH A. HANLEY  
AMY BAKER MANDRAGOURAS  
ANTHONY A. LAURENTANO  
KEVIN J. CANNING  
JANE E. REMILLARD  
DeANN FORAN SMITH  
PETER C. LAURO  
JEANNE M. DIGIORGIO  
DEBRA J. MILASINIC, Ph.D.  
DAVID J. RIKKERS  
DAVID R. BURNS  
JOHN S. CURRAN  
SEAN D. DETWEILER

CYNTHIA L. KANIK, Ph.D.  
MEGAN E. WILLIAMS, Ph.D.  
RICHARD NANO  
MICHAEL PHILLIPS  
LISA M. DIROCCO  
HATHAWAY P. RUSSELL  
MARIA LACCOTRIPE ZACHARAKIS, Ph.D.  
PETER A. DIMATTIA  
VINCENT P. LOCCISANO  
MERIDETH C. ARNOLD

SENIOR COUNSEL  
JAMES E. COCKFIELD

OF COUNSEL  
JEREMIAH LYNCH  
WILLIAM A. SCOFIELD, JR.  
SIBLEY P. REPERT

PATENT AGENTS

THEODORE R. WEST  
SHAYNE Y. HUFF, Ph.D.  
DANIEL B. KO

TECHNICAL SPECIALISTS

CYNTHIA M. SOROCKS  
PETER W. DINI, Ph.D.  
EUIHOON LEE  
JENNIFER K. ROSENFIELD  
ALLAN TAMESHITT, Ph.D.  
CATHERINE E. McPHERSON  
ERIC F. WAGNER, Ph.D.  
SHAHID HASAN, Ph.D.  
JACOB G. WEINTRAUB  
JONATHAN M. SPARKS, Ph.D.  
CRISTIN E. HOWLEY, Ph.D.

\* Admitted in NY only  
\* Admitted in TX only

RECEIVED

June 20, 2002

JUN 28 2002

U.S. Patent and Trademark Office  
Box Sequence  
P.O. Box 2327  
Arlington, VA 22202

TECH CENTER 1600/2900

Re: U.S. Patent Application Serial No. 09/750,590  
Title: "Beta-CAP73 Control of Normal and Abnormal Cell Migration"  
Inventors: Ira Herman and Alice Welch  
Filing Date: December 28, 2000  
Our Reference No. TUI-001CP

Dear Sir:

I enclose herewith for filing in the above-identified application the following:

1. Response to Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures (2 pages);
2. Request for One-Month Extension of Time (1 page in duplicate);
3. Transmittal Letter for Diskette Containing Sequence Listing (1 page);
4. Diskette Containing Computer Readable Form of Substitute Sequence Listing;
5. Paper Copy of Substitute Sequence Listing (pages 1-16);
6. Copy of Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures (1 page);
7. Specification: Version with Markings to Show Changes Made (1-86);
8. Substitute Specification (1-85); and
9. Prepaid acknowledgment postcard.

Please charge the amount of \$55.00 based on small entity status to our Deposit Account No. 12-0080. Please further charge any underpayments or credit any overpayments to our Deposit Account No. 12-0080. The undersigned requests any extensions of time necessary to respond. *A duplicate of this sheet is enclosed.*

Certificate of First Class Mailing (37 C.F.R. §1.8(a))

I hereby certify that this transmittal letter and the papers referred to as being enclosed therein are being deposited with the United States Postal Service as first class mail in an envelope addressed to: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202 on:

June 20, 2002  
Date

Elizabeth A. Hanley, Esq., Reg. No. 33,505

Respectfully submitted,

LAHIVE & COCKFIELD, LLP.

Elizabeth A. Hanley, Esq.,  
Attorney for Applicants  
Reg. No. 33,505



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re the application of: Ira Herman, *et al.*

Serial No.: 09/750,590

Filed: December 28, 2000

For: "Beta-CAP73 Control of Normal and Abnormal Cell Migration"

Attorney Docket No.: TUI-001CP

Group Art Unit: 1636

Examiner: Pappu, Sita S

RECEIVED

JUN 28 2002

TECH CENTER 1600/2900

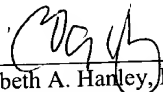
U.S. Patent and Trademark Office  
Box Sequence, P.O. Box 2327  
Arlington, VA 22202

Certificate of First Class Mailing (37 CFR 1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202 on the date set forth below.

6/26/02  
Date of Signature and of Mail Deposit

By:

  
Elizabeth A. Hanley, Esq.  
Reg. No.: 33,505  
Attorney for Applicants

**RESPONSE TO NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES**

Dear Sir:

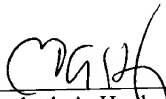
In response to the Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures, mailed from the U.S. Patent and Trademark Office on April 20, 2002 (Paper No. 15), we enclose a diskette which contains a Substitute Sequence Listing in computer readable form as required by 37 C.F.R. 1.821(e). Also enclosed is a paper copy of the Sequence Listing and a statement that the content of the Sequence Listing appearing on pages 1-16 and the computer readable copy are the same as required under 37 C.F.R. 1.821(f). A copy of the

Notice to Comply with Requirements for Patent Applications Containing Nucleotide and/or Amino Acid Sequence Disclosures is also enclosed herewith.

In further response, Applicants' attorney submits herewith a Version with Markings to Show Changes Made to the specification and a clean version of the Substitute specification in compliance with 37 C.F.R. 1.52. Please substitute the originally filed specification, including claims and abstract with the enclosed clean version of the Substitute specification (pages 1-80); claims (pages 82-84); and abstract (page 85). Please amend the application by inserting, immediately after the Abstract, the hard (paper) copy of the substitute Sequence Listing, numbered pages 1-16, submitted herewith. No new matter has been added.

Respectfully submitted,

LAHIVE & COCKFIELD, LLP



---

Elizabeth A. Hanley, Esq.  
Reg. No. 33,505  
Attorney for Applicants

28 State Street  
Boston, MA 02109  
Telephone: (617) 227-7400  
Facsimile: (617) 742-4214

Date: June 20, 2002

# NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Applicant must file the items indicated below within the time period set the Office action to which the Notice is attached to avoid abandonment under 35 U.S.C. § 133 (extensions of time may be obtained under the provisions of 37 CFR 1.136(a)).

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

- ☒ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998).
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- ☐ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- ☒ 7. Other Sequences are disclosed in the specification but are not identified by their sequence identifiers (i.e. SEQ ID NO). Since the specification discloses sequences that are not identified by their sequence identifier, it is unclear if all disclosed sequences are included in the sequence listing. Applicant is advised that, a substitute CRF and substitute paper copy of the Sequence Listing are required only if the sequences are not already included in the Sequence Listing. Applicant is reminded that the entire specification and figures should be reviewed for sequence disclosures. Applicant is further reminded that amendment to the specification, and/or figures is required to comply with 37 C.F.R. 1.821(d).

## Applicant Must Provide:

- ☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- ☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry in the specification.
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:  
 For Rules Interpretation, call (703) 308-4216  
 For CRF Submission Help, call (703) 308-4212  
 PatentIn Software Program Support

Technical Assistance.....703-287-0200  
 To Purchase PatentIn Software.....703-306-2600

**PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR REPLY**



RECEIVED  
 JUN 28 2002  
 TECH CENTER 1600/2900



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In re the application of:** Ira Herman, *et al.*

**Serial No.:** 09/750,590

**Filed:** December 28, 2000

**For:** "Beta-CAP73 Control of Normal and Abnormal Cell Migration"

**Attorney Docket No.:** TUI-001CP

**Group Art Unit:** 1636

**Examiner:** Pappu, Sita S

RECEIVED

JUN 28 2002

TECH CENTER 1600/2900

U.S. Patent and Trademark Office  
Box Sequence, P.O. Box 2327  
Arlington, VA 22202

**TRANSMITTAL LETTER FOR DISKETTE CONTAINING SEQUENCE LISTING**

Dear Sir:

Enclosed is a *substitute* diskette containing a computer readable form of the Sequence Listing for the above patent application. The Sequence Listing complies with the requirements of 37 C.F.R. §1.821. The material on the enclosed diskette is identical in substance to the Sequence Listing appearing on substituted pages 1-16 submitted herewith. The computer readable form of the Sequence Listing on the enclosed diskette is understood to comply with the requirements of §1.824(d). *No new matter has been added.*

**Certificate of First Class Mailing (37 C.F.R. §1.8(a))**

I hereby certify that this transmittal letter and the papers referred to as being enclosed therein are being deposited with the United States Postal Service as first class mail in an envelope addressed to: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202 on:

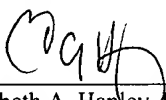
June 20, 2002

Date

Elizabeth A. Hanley, Esq., Reg. No. 33,505

Respectfully submitted,

LAHIVE & COCKFIELD, LLP

  
Elizabeth A. Hanley, Esq.  
Attorney for Applicants  
Reg. No. 33,505

Date: June 20, 2002